Application No.: 10/057,475

Page 10

Please replace the paragraph beginning at page 210, line 9 with the following:

--SEQ ID NO: 10,847 - Ly1484 protein sequence (long)
see, Figure 17 and Figure 18--

Please replace the paragraph beginning at page 210, line 11 with the following:

--SEQ ID NO: 10,848 - Ly1484 protein sequence (short)
see, Figure 17 and Figure 18--

REMARKS

The two copies of the written Sequence Listing are submitted herewith on compact disc in accordance with 37 C.F.R. §1.821(c). The required duplicate copies of the written form on compact disc are labeled "Copy 1 of 3" and "Copy 2 of 3". The computer readable form of the Sequence Listing is also submitted on compact disc, labeled "Copy 3 of 3".

Each compact disc is formatted for IBM-PC, MS-Windows 98. Each disc contains one file: --144-0-2.APP, 6,764,544 bytes, created on July 18, 2002, containing the above named sequences, SEQ ID NOS:1-10979. The duplicate copies of the written form of the Sequence Listing on compact disc are identical, *i.e.*, "Copy 1 of 3" and "Copy 2 of 3" of the compact discs are identical, and the sequence information recorded in computer readable form on compact disc, *i.e.*, "Copy 3 of 3", is identical to the written Sequence Listing (on compact disc).

The information contained in the computer readable compact discs was prepared through the use of the software program "FastSEQ".

The amendments inserting text into paragraphs from pages 140 and 141 clarify the nature of sequence information in SEQ ID NOS:1-664; SEQ ID NOS:665 and 666; SEQ ID NOS:667 and 668; SEQ ID NOS:669-2532; and SEQ ID NOS:2533-9597

GAIGER et al. PATENT

Application No.: 10/057,475

Page 11

in the accompanying Sequence Listing for the instant application. These sequences are also described in Tables 7, 8 and 9 of, and are present as SEQ ID NOS:1-9597 in the Sequence Listing for, the co-pending application USSN 09/796,692.

The amendment inserting text into the paragraph on page 149 clarifies the nature of sequence information in SEQ ID NO:9599 in the accompanying Sequence Listing for the instant application. This sequence is also described in the Sequence Listing for the co-pending application USSN 10/040,862 (filed November 6, 2001, Attorney Docket No. 014058-013520US) as SEQ ID NO:9599.

Justification for the inclusion of this sequence information in the Specification and Sequence Listing of the instant application may be found on page 1, lines 5-18, where the relevant statement "the entire specification, claims, sequences and figures of each...is specifically incorporated herein by reference in its entirety..." occurs in lines 16-17, pertaining to USSN 09/796,692 and USSN 10/040,862 (filed November 6, 2001, Attorney Docket No. 014058-013520US). Thus, the Sequence Listing submitted herewith includes no new matter.

This amendment incorporates by reference the material on compact disc in accordance with § 1.52(e)(5) and § 1.77(b)(4).

Attached hereto is a marked-up version of the changes made to the Specification by the current Preliminary Amendment. The attached pages are captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Application No.: 10/057,475

Page 12

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

Peter K. Seperack Reg. No. 47,932

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834 Tel: 415-576-0200 Fax: (415) 576-0300 PKS:dmw

SF 1366772 v1

GAIGER et al. Application No.: 10/057,475 Page 13



In the Specification:

Paragraph beginning at line 26 of page 1 has been amended as follows:

This application is a continuation in part of the U.S. patent application Serial No. , filed November 6, 2001, Attorney Docket No. 014058-10/040,862-013520US, entitled COMPOSITIONS AND METHODS FOR THE DETECTION, DIAGNOSIS AND THERAPY OF HEMATOLOGICAL MALIGNANCIES, which is a continuation in part of U.S. Serial No. 09/796,692 filed March 1, 2001, which claims priority to United States Provisional Patent Application Serial Nos. 60/186,126, filed March 1, 2000; Serial No. 60/190,479, filed March 17, 2000; Serial No. 60/200,545, filed April 27, 2000; Serial No. 60/200,303, filed April 28, 2000; Serial No. 60/200,779, filed April 28, 2000; Serial No. 60/200,999; filed May 1, 2000; Serial No. 60/202,084, filed May 4, 2000; Serial No. 60/206,201, filed May 22, 2000; Serial No. 60/218,950, filed July 14, 2000; Serial No. 60/222,903, filed August 3, 2000; Serial No. 60/223,416, filed August 4, 2000; and Serial No. 60/223,378, filed August 7, 2000; the entire specification, claims, sequences and figures of each of which is specifically incorporated herein by reference in its entirety without disclaimer and for all purposes.

Paragraph beginning at line 26 of page 1 has been amended as follows:

The Sequence Listing written in file -144-0-2.APP, 6,762,496 bytes, created on July 17, 2002, on duplicate copies of compact disc of the written form of the Sequence Listing, i.e., "Copy 1 of 3" and "Copy 2 of 3", and the sequence information recorded in computer readable form on compact disc, i.e., "Copy 3 of 3" for Application No: 10/057,475, Gaiger et al., COMPOSITIONS AND METHODS FOR THE DETECTION,

Application No.: 10/057,475

Page 14

DIAGNOSIS AND THERAPY OF HEMATOLOGICAL MALIGNANCIES, is hereby incorporated by reference. NOT APPLICABLE

Paragraph beginning at line 16 of page 17 has been amended as follows:

FIGS. 5 and 6 illustrate the cDNAs that are highly expressed in lymphoma cells (SEQ ID NOs:10,486-10,536 and SEQ ID NOs:10,10,537-10,580, respectively);

Paragraph beginning at line 22 of page 17 has been amended as follows:

FIG. 9 lists the nucleotide sequences (SEQ ID NOs:10,581-10,596) of antigens with similar tissue expression profiles as CD20 and CD52;

Paragraph beginning at line 25 of page 17 has been amended as follows:

FIG. 10 lists the nucleotide and protein sequences of Ly1464 (SEQ ID NOs:10,597 and 10,598);

Paragraph beginning at line 26 of page 17 has been amended as follows:

FIG. 11 illustrates the results of the TMpred report for Ly1464 (SEQ ID NO:10,598);

Paragraph beginning at line 27 of page 17 has been amended as follows:

FIG. 12 lists the MHC Class binding peptides of Ly1464 (SEQ ID NOs:10,599-10,818);

Application No.: 10/057,475

Page 15

Paragraph beginning at line 28 of page 17 has been amended as follows:

FIG. 13 illustrates the results of analyzing Ly1464 (SEQ ID NO:10,598) with the TSITES program;

Paragraph beginning at line 29 of page 17 has been amended as follows:

FIG. 14 lists the immunogenic peptides of Ly1464 (SEQ ID NOs:10,820-10,842);

Paragraph beginning at line 31 of page 17 has been amended as follows:

FIG. 15 illustrates the laboratory procedure used to synthesize recombinant Ra12-Ly1464 (cloniong primers = SEQ ID NOs:10,843 and 10,844; 6x His tag = SEQ ID NO:10,979);

Paragraph beginning at line 33 of page 17 has been amended as follows:

FIG. 16 lists the Ly1464 nucleotide sequence (SEQ ID NO:10,845), the Ra12-Ly1464 nucleotide sequence (SEQ ID NO:10,467), the Ra12-Ly1464 amino acid sequence (SEQ ID NO:10,468), and the properties of the Ly1464 protein;

Paragraph beginning at line 2 of page 18 has been amended as follows:

FIG. 17 lists Ly1484 nucleotide (SEQ ID NO:10,846) and amino acid (SEQ ID NO:10,897 and 10,848) sequences;

Application No.: 10/057,475

Page 16

Paragraph beginning at line 3 of page 18 has been amended as follows:

FIG. 18 illustrates the results of the TMpred report for Ly1484 long (SEQ ID NO:10,847) and Ly1484 short (SEQ ID NO:10,848);

Paragraph beginning at line 5 of page 18 has been amended as follows:

FIG. 19 lists the MHC class I binding peptides of Ly1484 long (SEQ ID NOs:10,849-10,908);

Paragraph beginning at line 6 of page 18 has been amended as follows:

FIG. 20 lists the MHC class I binding peptides of Ly1484 short (SEQ ID NOs:10,909-10,968);

Paragraph beginning at line 7 of page 18 has been amended as follows:

FIG. 21 illustrates the results of the TSITES analysis of Ly1484 long (SEQ ID NO:10,847);

Paragraph beginning at line 8 of page 18 has been amended as follows:

FIG. 22 illustrates the results of the TSITES analysis of Ly1484 short (SEQ ID NO:10,848);

Application No.: 10/057,475

Page 17

Paragraph beginning at line 12 of page 18 has been amended as follows:

FIG. 24 lists the sequence of GenBank clone on chromosome 15q21 clone b2265b18 (acc. no. AC008131) (SEQ ID NO:10,475), a clone that matches with Ly1485P.

Paragraph beginning at line 14 of page 18 has been amended as follows:

FIG. 25 lists the sequence of the human secreted protein-encoding gene 9 cDNA clone HTOHB55 SEQ ID NO:1 (acc. no. AAH19210) (SEQ ID NO:10,476), a clone that matches with Ly1485P.

Paragraph beginning at line 16 of page 18 has been amended as follows:

FIG. 26 lists the sequence of human secreted protein-encoding gene 9 cDNA clone HTOHB55 SEQ ID NO:19 (acc. no. AAH19178) (SEQ ID NO:10,477) on chromosome 15q21, a clone that matches with Ly1485P.

Paragraph beginning at line 20 of page 18 has been amended as follows:

FIG. 27 lists the nucleotide (SEQ ID NO:10,970) and amino acid (SEQ ID NO:10,969) sequences of Ly1488;

Paragraph beginning at line 21 of page 18 has been amended as follows:

FIG. 28 illustrates the results of the TMpred analysis of Ly1488 (SEQ ID NO:10,969);

Application No.: 10/057,475

Page 18

Paragraph beginning at line 23 of page 18 has been amended as follows:

FIG. 29 lists the nucleotide sequence for the lung cancer associated polynucleotide sequence SQID 265 (Genseq accession number AAF18246) (SEQ ID NO:10,478), a clone that matches the Ly1449 and Ly1480 sequences.

Paragraph beginning at line 26 of page 18 has been amended as follows:

FIG. 30 lists the nucleotide sequence for the <u>Homo homo sapiens GenBank</u>

Genbank clone on chromosome 17 clone RP11-956N15 (accession number AC021581)

(SEQ ID NO:10,479), a clone that matches the Ly1449 and Ly1480 sequences.

Paragraph beginning at line 27 of page 140 has been amended as follows:

Analysis of hematological malignancy subtracted clones by microarray analyses on a variety of microarray chips identified the sequences set forth in SEQ ID NO:1 through <u>SEQ ID NO:664 SEQ ID NO:668</u> of the instant application and co-pending application USSN 09/796,692 as being at least two-fold overexpressed in hematological malignancies versus normal tissues.

Paragraph beginning at line 4 of page 141 has been amended as follows:

Table 7 in co-pending application USSN 09/796,692 lists the sequences of the polynucleotides obtained during the analyses of the present invention. Shown are the 664 668 polynucleotide sequences, along with their clone name identifiers, as well as the serial number and filing date of the priority provisional patent application in which the clone was first identified. Also listed in Table 7 are the TCL-I DNA and protein (SEQ ID NOs:665 and 666) and Coronin1A DNA and protein (SEQ ID NOs:667 and 668).

Application No.: 10/057,475

Page 19

Paragraph beginning at line 9 of page 141 has been amended as follows:

Table 8 in co-pending application USSN 09/796,692 identifies the putative open reading frames obtained from analyses of the cDNA sequences obtained in <u>SEQ ID NO:1-SEQ ID NO:664 SEQ ID NO:1-SEQ ID NO:668</u> in the co-pending application. Shown are the sequence identifiers, the clone name and translation frame, and the start and stop nucleotides in the corresponding DNA sequence used to generate the polypeptide sequence of the open reading frame (SEQ ID NOs:669-2532).

Paragraph beginning at line 14 of page 141 has been amended as follows:

Table 9 in co-pending application USSN 09/796,692 identifies an additional set of particular hematological malignancy-related cDNA sequences that were obtained using the subtractive library and microarray methods as described above. These sequences, designated SEQ ID NO:2533-SEQ ID NO:9597 in the instant application and co-pending application USSN 09/796,692, are shown in the Table along with the original clone name, and the serial number and filing date of the priority provisional application in which the clone was first described.

Paragraph beginning at line 30 of page 145 has been amended as follows:

A full length sequence of candidate Ly1484P (Figure 17) was obtained using the Genbank database. Ly1484P was mapped to human chromosome 10. There is both a long and short version of Ly1484P (Figure 17; long version – SEQ ID NO:10,847; short version – SEQ ID NO:10,848). TMpred analysis of Ly1484P indicates that this protein contains a transmembrane domain (Figure 18). Several MHC class I binding peptides of Ly1464P have been identified (Figures 19 & 20; SEQ ID NOs:10,849-10,908 and 10,909-10,968, respectively) and are being used to generate antigen-specific CTLs. Using the TSITES program, T-helper epitopes have also been identified (Figures 21 &

PATENT

GAIGER et al.

Application No.: 10/057,475

Page 20

22). Polypeptides have been generated and are being used to generate antibodies that are

specific for Ly1484P.

Paragraph beginning at line 23 of page 149 has been amended as follows:

SEQ ID NO:9599 in the instant application and co-pending application USSN

10/040,862-09/796,692, also termed "Ly1448," a portion of which was disclosed earlier

in co-pending application USSN 09/796,692 as SEQ ID NO:636 was used to screen a

series of MicroArray and RealTime chips and panels containing cDNAs made from

RNAs isolated from normal cells and hematologically malignant cells. SEQ ID NO:9599

appeared to be expressed in normal B cell lines, CD 19⁺ cell lines, and highly expressed

in a subset of Non-Hodgkins B-cell lymphoma cell lines, Hodgkins lymphoma cell lines,

follicular lymphoma cell lines, and Chronic Lymphocytic Leukemia cell lines.

In the Informal Sequence Listing:

Paragraph beginning at line 48 of page 186 has been amended as follows:

SEO ID NO:10,482: Ly1452 LS-1452 with His tag nucleotide sequence (see,

Example 13)

Paragraph beginning at line 32 of page 187 has been amended as follows:

SEQ ID NO:10,483: Lv1452 LS-1452 with His tag amino acid sequence (see,

Example 13)

Application No.: 10/057,475

Page 21

Paragraph beginning at line 24 of page 209 has been amended as follows:

SEQ ID NO: 10,598 - Ly1464 protein sequence

see, Figure 10, Figure 11 and Figure 13

Paragraph beginning at line 9 of page 210 has been amended as follows:

SEQ ID NO: 10,847 - Ly1484 protein sequence (long)

see, Figure 17 and Figure 18

Paragraph beginning at line 11 of page 210 has been amended as follows:

SEQ ID NO: 10,848 - Ly1484 protein sequence (short)

see, Figure 17 and Figure 18

SF 1366772 v1

PATENT